

chief, son of Black Hawk. ED. REG.—The same day and in the ring for the best roadster stallion five years old and over, 29 entries, he took the first premium \$150. At the Nelson county fair grounds, near Bardstown, Ky., in September, 1859, he won the speed ring, time 2:40 1/2 on 1-3 mile track, having to go round three times, making a mile and seventeen feet. In June, 1859, he won the speed ring at New Albany, Indiana, on a full mile track in 2:40; I think the best time recorded, made by any stallion in Kentucky or Indiana, and that done in the midst of a full season and without training. At the same time and place he won the first premium of \$100 in the sweepstakes stallion ring, 10 entries.

"Also won the speed premium in the fall of 1866, at New Liberty (Owen Co.) fair, given for the fastest trotting stallion, mare or gelding; time 2:43 1/4. Also the premium as the best harness stallion, and the sweepstakes for the best harness stallion of any age.

"Was winner of the first premium as the best stallion for general use, at the South-Western Fair Grounds, near Louisville, Ky.; also after three months lameness, and going three-fourths of a mile with only one trace, lost the speed ring by one second in 1858. He won the speed ring at the United States Fair, held at the Michigan State Fair held at Detroit, in the general use ring in 1856; winner of the first prize at the Michigan State fair in 1855; winner of the sweepstakes premium at Michigan State fair in 1854; winner of the first premium at the Branch County fair, 1855, as a horse of all work, and in 1855 as the best stallion for speed. He trotted for a premium offered for three-year-old colts, in Addison Co., Vt., being then three years old, winning with ease; and at two years old he won a race at Ticonderoga, N. Y., against seven competitors, winning distinction."

It would appear from the above that Green Mountain Black Hawk went from Vermont to Michigan in 1853 or 4, and remained there as late as the fall of 1856. He first appears in Kentucky in 1857 and was there in 1867, when this bill was issued. Mr. Dorsey states that he afterwards went to Missouri, where he died about 1872. He would seem to have been one of the best entire sons of Sherman Black Hawk. Will our Bridport friends tell us who bred his dam and grand-dam?

ANSWERS TO QUERIES.

BLACK MARIA, DAM OF YOUNG COLUMBUS.—This mare was probably got by Young Cock of the Rock, son of Barnum's Cock of the Rock, by Durco, by imp. Diomed. The claim that she was by Harris' Hambletonian never had any foundation. For full particulars see THE REGISTER, issues of Dec. 4 and Dec. 25, last.

To A. R. H., Spencer, Mass.

PATHFINDER—(of St. Johnsbury, Vt.) In response to the query of Mr. C. E. Ewers, we learn from Walter S. Hawley, Esq., of Danville, Vt., as follows: "I knew a colt, a beauty, bred by Alanson Aldrich of St. Johnsbury, sired by Old Morrell and out of a sorrel mare sired, I think, by Morgan Goldfin. Aldrich sold him in the fall after he was a year old to Jas. Vincent of Wadden; he kept him till the summer or fall after he was three years old and sold him, I think, to a New Hampshire man for \$1000. He was called Pathfinder, was brown in color and was a very promising colt; but he got hurt and lame in one hind ankle so that, I think, his trotting qualities were never developed. He was afterwards sold and went West."

SHERMAN BLACK HAWK—THE NORTH HORSE AND THE MYRICK HORSE.—We would inform several inquirers that these are different names for one and the same horse, one of the best sons of Vermont Black Hawk.

THE SCIENCE OF HORSE BREEDING.

(Rochester (N. Y.) Democrat and Chronicle) J. B. Lippincott & Co. of Philadelphia have just published for Randolph Huntington of this city a fine quarto giving a history of "Leopard" and "Linden," General Grant's Arabian stallions presented by the sultan of Turkey in 1879, and their sons, "General Beale," "Hegira," and "Islam," bred by Mr. Huntington, and also reference to the famous horse Henry Clay. This volume is in gilt with fine paper and broad margins and is illustrated with very fine engravings of all the horses described, from drawings by H. S. Kittredge. The engravings show that Mr. Kittredge was a master. The mechanical work of the volume is of the best and Mr. Huntington may take just pride in the volume.

The subjects taken up in the volume are admirably treated. While giving valuable information and descriptions of the Arabian horses, a philosophy of breeding is unfolded. This is founded on the experience of France, England and Russia in rearing thoroughbred horses. Mr. Huntington shows that the original stock was Arabian in every case. A very interesting list of the royal stud in the time of Cromwell is given. This list and historical sketch are derived from original documents in the archives of the British government. The history shows that the British government long ago turned its attention to the improvement of the breed of horses and that the royal stud was kept intact for the purpose of keeping the blood up to the original standard. The influence of this foresight has been felt throughout England. Through the courtesy of General Grant, Mr. Huntington has himself entered upon experi-

ments in breeding from Arabian stock along lines which he has carefully determined from a study of horses and their ancestry in this country. Perhaps the most interesting portion of the book is that which gives reasons for breeding to General Grant's Arabian stallions. In this is contained a review of the system which Mr. Huntington has adopted in his experiments, and which he believes will produce horses that will have all the good qualities of those which are reared abroad and imported into this country. The difficulties attending the experiment are pointed out. The greatest is that no sales can be made for some time to come, without breaking the continuity of the system, and rendering judgment as to practical results difficult.

Those who read Mr. Huntington's book must be convinced of the value of the experiments he is making and struck with the forcible character of the reasons advanced for entering upon them. It occurs to us that his experiments might properly be conducted at the State experimental farm in Geneva. We trust that our suggestion may be considered by those in charge of the farm. It is fact that we, as a people, are notably deficient in organized effort to improve breeds of cattle and horses. We import both to a large extent. Both might be bred to advantage in this country. Foreign governments have taken care of such matters. The most that has been done in this country has been the establishment of a few agricultural colleges and State farms. The State farms are mostly devoted to the cereals, root crops and fruit. The reason, perhaps, for neglecting the breeding of horses is probably that no one connected with these farms has well-defined ideas on the subject. We believe Mr. Huntington can give good reasons for the faith that is in him, and we believe he ought to have a chance to carry his experiment to the ultimate at the State farm.

Farm Topics.

CONDITIONS AFFECTING THE COLOR AND FLAVOR OF MAPLE SUGAR.

The demand for maple sweets as a luxury is increasing, and their price will not be governed by imported sugars. Hence the quality of our goods must be looked after so far as is possible, in order that the highest prices may be obtained, for quality governs the price. Quality consists of color and flavor.

There are two classes of causes that govern the color and flavor of our sweets: one is natural, and hence not under our control, while the other is wholly at our command. Vermont has the reputation of producing the finest flavored sugar and molasses of any State in the Union. This fact is not due to our superior knowledge in its manufacture, but to causes existing in nature. Our geographical location and climatic conditions are peculiarly favorable for the sugar maple. The above are general conditions applicable to the State.

In addition to this, there are many local conditions that help to the same end. I know of one orchard which has a local notoriety for its very fine products. It stands on a soap-stone ledge, and does not produce so much sap as some others, but it is very sweet. This sap has about 5 1/2 per cent. of sugar in it, while ordinary sap has only 3 per cent. Sugar from this orchard is noted for its peculiarly fine flavor. I know of another orchard, which is noted for its poor sugar, having a dark color, no, matter who makes it. Merchants who purchase sugar tell me that these sweets made on high lands and on the sides of mountains are worth 1 1/2 c per lb. more than those made on low lands. The above are some of the natural causes which help to modify the article.

It appears, then, that in some instances, nature gives us all grades of sap, from the best to the poorest. Every sugar-maker ought to fully understand the whole make-up of the maple, so that he may be able to make nice sugar even with unfavorable conditions. From the best of trees, under the best conditions, we can make a poor article of sugar, while from the poorest trees surrounded with bad conditions we can make good sugar, yet it is not possible to make so fine flavored sugar from the poor tree as from the good tree. I have made four grades of sugar from the same tree and on the same day.

A maple (with all other trees) puts its annual growth on the outside. In this last year's growth of wood, or outside ring, is contained the best sap, which has the finest flavor. And from this wood, sugar can be made as white as snow. Every ring toward the heart of the tree contains a decreasing grade of sap, growing higher in color, and containing less sugar with poorer flavor. It appears, then, that the shallower we bore, the whiter the sugar and the finer the flavor.

Color governs flavor. All dark sugar and molasses have a poor flavor. The darker the sugar is, the poorer is the flavor.

If we bore two inches deep early in the season, we shall make a fair grade, because then most of the sap comes from the outer wood. As the season advances, the color will deepen with a loss of flavor because the sap is coming from an older growth of wood nearing the center, where the wood is darker, the sap taking its color from the wood through which it flows. As we ascend the tree, the color of the sap increases (I am speaking of the sap wood, which is white), together with an increased percentage of sugar,

and I think an increase of flavor. Should this last point prove true, it would follow that the higher and shallower we bore, the better the product will be, but the less of it, as quantity and quality do not go together.—Timothy Wheeler, Washington county, Vt., in Homestead.

COMMERCIAL FERTILIZERS.

For the year 1885, twenty-nine (29) brands of fertilizers were licensed and sold in this State. This year only the following named twenty (20) brands have been licensed by the State treasurer:

"Soluble Pacific Guano,"
"E. Frank Cox's high grade Superphosphate,"

"Bradley's X. L. Superphosphate,"
"Bradley's Patent Superphosphate,"

"Bradley's Sea Fowl Guano,"
"Bradley's Original Cox's phosphate,"

"Bay State Bone Superphosphate of Lime,"

"Quinnipiac Phosphate,"
"Quinnipiac Potato Phosphate,"

"Quinnipiac Pine Island Phosphate,"
"Buffalo Special Superphosphate,"

"Buffalo Potato, Hop and Tobacco Phosphate,"

"Buffalo Ammoniated Bone Superphosphate,"

"The Bay State,"
"Homestead Superphosphate,"

"The Cumberland Superphosphate,"
"Bowker's Stockbridge Manures,"

"Bowker's Hill and Drill Phosphate,"
"The Americans,"

"The Fish and Potash."

Sheep Interest.

BOSTON WOOL MARKET.

The Boston Journal of the 19th inst., reviewing the wool market for the week ended on that date, says: The wool market is in rather a dull and unsettled state. There is no material change in prices, but buyers are quite indifferent and holders are disposed to close up old stocks as fast as possible, as the new clip of the country will soon be upon the market, commencing next month with Texas and California. The stock of wool on hand is moderate for the season, and last year's clip has been consumed more closely than usual, but the prospects of the trade are not so favorable as a short time ago, and the business is likely to be embarrassed for some time to come on account of labor movements that are becoming more prevalent every day. Manufacturers appear to be in no haste to purchase wool when they may be compelled to stop their mills, and if production is materially reduced on this account the supply of wool is abundant, now and prospectively. In fact, with large imports of foreign new wool coming on the market and a reduced production it would be difficult to maintain prices on our present basis. On the other hand if the labor movement could be reconciled, and the business go on without interruption, the prospects ahead would be quite favorable for a fairly remunerative trade during the year. The sales of the week have been 1,756,300 pounds of all kinds. In interior and neighboring markets the business has also been very light. Some buyers have already started for California, Texas and the West to be prepared to operate if prices open at reasonable figures, but we do not look for an active movement in new wool if the advices received are correct, that new Texas wool has been sold on the sheep's back at 21 and 22 cents in Texas, and that extreme prices are asked at other points. The London sales open next Tuesday, but no change is anticipated. There is some inquiry for English and Irish combing, but no sales of importance.

The demand for washed fleeces has been quite limited and the business of the week the smallest for some time.

The demand for combing and delicate fleeces has been light, but stocks are small and desirable assortments scarce.

Prices for the most part nominal. The sales include 10,000 pounds delicate and combing at 35 to 36 cents, and 5000 pounds combing at 34 to 12 cents per pound.

The demand for unwashed wools has been quite moderate, and the sales of the week have been 231,000 pounds of all kinds. In prices no change, although the tendency is in favor of the buyers.

The sales of Territory wool have been 83,000 pounds, and include 8000 pounds No. 1 at 22 to 24 cents, and 75,000 pounds at 19 to 25 cents for fine and medium. In Oregon wool the sales have been 10,000 pounds valley on private terms. In un-washed and unmerchantable fleeces the sales have been 138,000 pounds, and include 25,000 pounds at 21 to 27 cents, 500 pounds at 23 cents, 87,500 pounds at 19 to 25 cents, 20,000 pounds at 20 to 21 cents and 5000 pounds at 21 to 22 1/2 cents per pound.

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If you are suffering from a sense of extreme weariness, try one bottle of Ayer's Sarsaparilla. It will cost you but one dollar, and is invaluable good. It will do away with that tired feeling, and give you new life and energy.

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